

IN THE SPECIFICATION

Please amend the paragraph beginning at page 5, line 32, as follows:

Such a method is, for example, described in “Symbol-Aided Plus Decision-Directed Reception for PSK/TCM Modulation on Shadowed Mobile Satellite Fading” (G. T. Irvine and P. J. McLane: IEEE Journal on Selected Areas in Communications, pp. 1289-1299, vol. SAC-10, ~~Dec~~ Oct 1992)”.

Please amend the paragraph beginning at page 28, line 23, as follows:

As has been described above, path search and channel estimation may be implemented in a recursive manner, in other words, mutually ~~complementary~~, by complementary, by performing path search of step S2 and channel estimation of step S7 in the order of the first path search step → the first channel estimation step → the second path search step → the second channel estimation step → the second channel path search step → the second channel estimation step → the second channel path search step → the second channel estimation step..., so that the path search accuracy and the channel estimation accuracy may be further improved.

Please amend the paragraph beginning at page 34, line 16, as follows:

Referring to Fig. 5, the received packet signal is stored in a memory (not shown), and then supplied to a multicarrier demodulator 210 via the terminal 101. The multicarrier demodulator 210 resolves the supplies received packet signals into components of each subcarrier, and supplies to the circuits 200-1 to ~~220-M~~ 200-m for each subcarrier component. It is to be noted that the multicarrier demodulator 210 may be realized using elements such as a discrete Fourier transformation device (DFT), fast Fourier transformation device (FFT) and filters.

Please amend the paragraph beginning at page 39, line 35, as follows:

The path selectors 134 included in the circuits 200-1 to 200-m, respectively, are supplied with the delay profile from the delay profile generator 133 and select paths to be RAKE combined. The path selectors 134 supply information of the selected paths to the delay process controllers ~~177~~ 117 via the switches 118.

Please amend the paragraph beginning at page 40, line 5, as follows:

Accordingly, since path information for each subcarrier are individually supplies to the delay process controllers ~~177~~ 117, the timings of the dispreading processes are performed in the RAKE finger circuits 110-1 to 110-3 can be controlled for each subcarrier.

Please amend the paragraph beginning at page 54, line 1, as follows:

In Fig. 21, the received signal including the received packet signal and the common control channel are supplied to the delay part 212 or to a channel estimating part ~~226~~ 224 via the switch 210. The channel variation estimating part ~~226~~ 224 corresponds to the channel estimating parts A 20-1 to 20-3 and channel estimating parts 30-1 to 30-3 shown in Fig. 1. The switch 210 is switched between the terminal ~~(a)~~ (a1) side or to the terminals (b1 to bn) side so as to separate pilot symbols  $r_p(i)$ ,  $r_{p,1}(i)$ ,  $r_{p,k-1}(i)$ , information symbols  $r_d(i)$  and the pilot symbols multiplexed with the common control channel,  $c_p(i)$  of the received packet signal.

Please amend the paragraph beginning at page 54, line 14, as follows:

The channel variation estimating part ~~226~~ 224 implements channel estimation using the supplied pilot symbols  $r_p(i)$ ,  $r_{p,1}(i)$ ,  $r_{p,k-1}(i)$  and  $c_p(i)$  and supplies complex conjugate values  $\xi_d(i)$  of the channel estimation value to channel variation compensation part 216. Note

that the letter  $I$  of the complex conjugate values  $\xi_d(i)$  is a natural number, and may vary up to the number of symbols of a pilot symbol,  $N_d$ . On the other hand, the delay part 212 delays the supplied information symbols  $r_d(i)$  and supplies the information symbols  $r_d(i)$  to the channel variation compensation part 216.

Please amend the paragraph beginning at page 61, line 11, as follows:

Firstly, the channel variation estimating part A 232 implements channel estimation using pilot symbols. The channel estimation method using the pilot symbols may be a method adopted in either one of the first to fifth embodiments of the channel estimating part described above. Next, the channel variation compensation part 234 compensates for the channel variation by multiplying the complex conjugate values  $\xi_{A,k,d}(i)$  of the derived channel estimation value by the corresponding information symbols  $r_{k,d}(i)$ , the coherent detection and tentative data decision is implemented on the information symbols. The tentative data decision information symbols are supplied to a parallel-to-serial converter 264 of Fig. 26.